CONFIDENTIAL

5   CLAIMS

What is claimed is:

1. A method for crankback handling in a multi-peer group network,

10   comprising:

receiving a first connection request from a node of a first peer group;

detecting a call failure within a second peer group;

transmitting a crankback from the second peer group to the first peer

group, wherein the crankback specifies a blocked interface at a first link

15   between the first peer group and the second peer group, the crankback

transmitted from a node of the second peer group; and

receiving a second connection request from the node of the first peer

group, the second connection request using a second link to the second peer

group that avoids the call failure.

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2. The method of claim 1 wherein the first peer group is a preceding peer

group and the second peer group is a succeeding peer group.

3. The method of claim 1 wherein the node of the second peer group is an

25   entry border node configured to receive connection requests for the second peer

group.

4. The method of claim 1 wherein the blocked interface is specified

between an originating node in the first peer group and an entry border node in

30   the second peer group.

5   5. The method of claim 4 wherein the blocked interface causes the
originating node to use an alternate exit border node node within the first peer
group to implement the second link to the second peer group.

6. The method of claim 1 wherein the network is an ATM (asynchronous
10   transfer mode) network.

7. The method of claim 6 wherein the node of the second peer group is
configured to use a DTL (Designated Transit List) to discover the first
connection request was transmitted from the first peer group.

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8. The method of claim 1 further comprising:
transmitting a list from the node in the second peer group to the node in
the first peer group, the list specifying nodes in the first peer group that have
connectivity with the node in the second peer group; and
20   using the information in list to transmit the second connection request
to ensure the second link avoids the call failure.

9. A packet switch for crankback handling in a multi-peer group
network comprising:
25   means for receiving a first connection request from a node of a first peer
group;
means for detecting a call failure within a second peer group;
means for transmitting a crankback from the second peer group to the
first peer group, wherein the crankback specifies a blocked interface at a first
30   link between the first peer group and the second peer group, the crankback
causing a second connection request from the node of the first peer group, the

5   second connection request using a second link to the second peer group that

avoids the call failure.

10. The packet switch of claim 9 wherein the first peer group is a

preceding peer group and the second peer group is a succeeding peer group.

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11. The packet switch of claim 9 wherein the packet switch is an entry

border node configured to receive connection requests for the second peer

group.

15   12. The packet switch of claim 9 wherein the blocked interface is

specified between an originating node in the first peer group and the packet

switch in the second peer group.

13. The packet switch of claim 12 wherein the blocked interface causes

20   the originating node to use an alternate exit border node node within the first

peer group to implement the second link to the second peer group.

14. The packet switch of claim 9 wherein the packet switch is an ATM

switch.

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15. The packet switch of claim 14 the ATM switch is configured to use a

DTL (Designated Transit List) to discover the first connection request was

transmitted from the first peer group.

5   16. The packet switch of claim 14 wherein the packet switch is

compatible with a version of a PNNI (private network to network interface)

standard.

        17. The packet switch of claim 9 further comprising:

10   transmitting a list to the node in the first peer group, the list specifying

nodes in the first peer group that have connectivity with the packet switch,

wherein the node uses the list to ensure the second link avoids the call failure.

        18. A computer readable media having computer readable code which

15   when executed by a packet switch cause the packet switch to implement a

method for crankback handling in a multi-peer group network, comprising:

        receiving a first connection request from a node of a first peer group;

        detecting a call failure within a second peer group;

        transmitting a crankback from the second peer group to the first peer

20   group, wherein the crankback specifies a blocked interface at a first link

between the first peer group and the second peer group, the crankback

transmitted from a node of the second peer group; and

        receiving a second connection request from the node of the first peer

group, the second connection request using a second link to the second peer

25   group that avoids the call failure.

        19. The computer readable media of claim 18 wherein the first peer

group is a preceding peer group and the second peer group is a succeeding peer

group.

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5   20. The computer readable media of claim 18 wherein the node of the

second peer group is an entry border node configured to receive connection

requests for the second peer group.

21. The computer readable media of claim 18 wherein the blocked

10   interface is specified between an originating node in the first peer group and an

entry border node in the second peer group.

22. The computer readable media of claim 21 wherein the blocked

interface causes the originating node to use an alternate exit border node node

15   within the first peer group to implement the second link to the second peer

group.

23. The computer readable media of claim 18 wherein the network is an

ATM (asynchronous transfer mode) network.

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24. The computer readable media of claim 23 wherein the node of the

second peer group is configured to use a DTL (Designated Transit List) to

discover the first connection request was transmitted from the first peer group.

25   25. The computer readable media of claim 18 further comprising:

transmitting a list from the node in the second peer group to the node in

the first peer group, the list specifying nodes in the first peer group that have

connectivity with the node in the second peer group; and

using the information in list to transmit the second connection request

30   to ensure the second link avoids the call failure.